

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A laser-diode-pumped solid-state laser oscillator, ~~characterized by~~ comprising:
 - a solid-state pumping medium;
 - a plurality of laser diodes arranged around said solid-state pumping medium and ~~adapted~~ configured to irradiate pumping light to said solid-state pumping medium;
 - ~~a detector~~ detection means ~~adapted~~ configured to detect a failure of a failed one of said laser ~~diode~~ diodes; and
 - ~~a control means~~ controller ~~adapted~~ configured to determine a position of said failed laser diode, ~~the failure of which is detected by said detection means~~, and to control supply currents to other normal laser diodes, according to the position of said failed laser diode ~~whose failure occurs,~~
 - wherein said controller is configured to stop supply of electric current to and turn off a part or all of normal laser diodes positioned on a same plane as the position of said failed laser diode, and
 - wherein said same plane is perpendicular to a central longitudinal axis of said solid-state pumping medium.
2. (canceled)

3. (currently amended) The laser-diode-pumped solid-state laser oscillator according to claim 21, ~~wherein characterized in that:~~

———said ~~control means~~controller is ~~adapted~~configured to stop supply of electric current to and turn off a normal laser diode provided at a position facing the position of the failed laser diode ~~whose failure occurs~~ in a case where a direction number of said laser diodes is even.

4. (currently amended) The laser-diode-pumped solid-state laser oscillator according to claim 21, ~~wherein characterized in that:~~

———said ~~control means~~controller is ~~adapted~~configured to stop supply of electric current to and turn off all of the normal laser diodes positioned on ~~the said same plane as the position of said laser diode whose failure is caused and perpendicular to the central axis of said solid-state pumping medium~~ in a case where a direction number of said laser diodes is odd.

5. (currently amended): The laser-diode-pumped solid-state laser oscillator according to claim 1, ~~wherein characterized in that:~~

———said ~~detection means~~detector is provided between electrodes of said failed laser diode and is ~~adapted~~configured to detect ~~a the~~ failure of said failed laser diode according to a voltage between said electrodes of said failed laser diode.

6. (currently amended): The laser-diode-pumped solid-state laser oscillator according to claim 21, ~~wherein characterized in that:~~

—said ~~control means~~ controller is ~~adapted~~ configured to short-circuit between electrodes of said ~~failed~~ laser diode and to bypass electric current flowing ~~through~~ to said ~~failed~~ laser diode by controlling a bypass ~~means~~ circuit provided between said electrodes of said ~~failed~~ laser diode.

7. (currently amended): The laser-diode-pumped solid-state laser oscillator according to claim 1, ~~characterized by including~~ further comprising an:

—~~adjusting means~~ adapted configured to detect power of an outputted laser beam and to adjust an amount of electric power supplied to said normal laser ~~diode~~ diodes so as to obtain desired laser beam power.

8. (currently amended) The laser-diode-pumped solid-state laser oscillator according to claim 1, ~~further comprising~~ characterized in that:

—~~a plurality of cavities, each of which is a combination of~~ comprises said a solid-state pumping medium and a plurality of said laser ~~diode~~ diodes.

—~~wherein the plurality of cavities~~ -are arranged on a same optical axis of a laser beam to thereby obtain a laser output.

9. (currently amended) A method of controlling laser diodes of a laser-diode-pumped solid-state laser oscillator ~~adapted configured~~ to pump a solid-state pumping medium by pumping light outputted from said laser diodes to obtain a laser output, ~~characterized by the method~~ comprising the steps/operations of:

detecting a failure of a failed one of said laser ~~diode~~ diodes;

determining a position of said failed laser diode ~~the failure of which occurs~~;
selecting a laser diode, which is to be turned off, according to the determined position;
turning off said selected laser diode; and
adjusting a laser output, which is changed by turning off said selected laser diode, to a
desired laser output,

wherein said operation of selecting said laser diode comprises selecting a part or all of
normal laser diodes positioned on a same plane as the position of said failed laser diode, and

wherein said same plane is perpendicular to a central longitudinal axis of said solid-state
pumping medium.

10. (canceled)

11. (currently amended) The method of controlling laser diodes according to claim 9,

wherein characterized in that:

——, ~~said step~~ operation of selecting said laser diode ~~is adapted~~ comprises to select selecting a
normal laser diode provided at a position facing the position of said failed laser diode ~~whose
failure occurs~~ in a case where a direction number of said laser diodes is even.

12. (currently amended) The method of controlling laser diodes according to claim 9,

wherein characterized in that:

_____, said ~~step~~operation of selecting said laser diode ~~is adapted to comprises stop~~stopping supply of electric current to and ~~turn~~turning off all of normal laser diodes positioned on ~~the~~a same plane as the position of said failed laser diode ~~whose failure is caused~~, and
_____, wherein said same plane is perpendicular to ~~the~~a central longitudinal axis of said solid-state pumping medium in a case where a direction number of said laser diodes is odd.

13. (new): A laser-diode-pumped solid-state laser oscillator comprising:
- a solid-state pumping medium;
 - a plurality of laser diodes arranged around said solid-state pumping medium and configured to irradiate pumping light to said solid-state pumping medium;
 - a detector configured to detect a failure of a failed one of said laser diodes; and
 - a controller configured to determine a direction from which said failed laser diode irradiated pumping light to said solid-state pumping medium, and to control supply currents to other normal laser diodes, according to the determined direction,
- wherein said controller is configured to stop supply of electric current to and turn off a part or all of normal laser diodes positioned on a same plane as the direction from which said failed laser diode irradiated pumping light to said solid-state pumping medium, and
- wherein said same plane is perpendicular to a central longitudinal axis of said solid-state pumping medium.